

10/630,969

IN THE CLAIMS:

This listing of claims replaces all prior versions, and listings, of the claims in the application:

1. – 16. (Canceled)

17. (Currently Amended) A method of forming a semiconductor microstructure, the method comprising:

positioning a substrate containing an initial dielectric layer in a process chamber, the initial dielectric layer being at least one selected from a group consisting of a first oxide layer and a high-k layer;

flowing a process gas comprising an oxygen-containing gas in the process chamber; and

forming an a second oxide layer with high thickness uniformity, the second oxide layer being formed between the initial dielectric layer and the substrate in a self-limiting oxidation process, wherein the partial pressure of the oxygen-containing gas in the process chamber is less than about 50 Torr.

18. (Canceled)

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19. (Currently Amended) The method according to claim 18, wherein the oxide layer at least one of the first and second oxide layers comprises SiO₂.

20. – 21. (Canceled)

22. (Currently Amended) The method according to claim 18 claim 17, wherein the high-k layer comprises at least one of HfO₂, ZrO₂, Ta₂O₅, TiO₂, Al₂O₃, and HfSiO.

23. (Original) The method according to claim 17, wherein the process chamber pressure is less than about 40 Torr.